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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,026	03/12/2004	Alexei Glebov	02EK-108866	6715
30764	7590	04/07/2005	EXAMINER	
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP			KIANNI, KAVEH C	
333 SOUTH HOPE STREET			ART UNIT	
48TH FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90071-1448			2883	

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/799,026

**Applicant(s)**

GLEBOV ET AL.

**Examiner**

Kianni C. Kaveh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 8-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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- Applicant's election without traverse of claims 1-7 in a paper submitted on 1/24/05 is acknowledged. The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

#### **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

##### **Replacement Drawing Sheets**

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

##### **Annotated Drawing Sheets**

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

##### **Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

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If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

The drawings were received on March 07, 2005. These drawings are do not show any changes made by the applicant and they need to comply with 37 CFR 1.84 as stated above.

Thus, New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the new or replacement sheets as stated above are not labeled "Replacement Sheet" or "New Sheet" and applicant needs to provide information of any changes made to the drawings. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. (Yoshimura ) (US 6684007).

Regarding claim 1, Yoshimura teaches an optical connector (shown in at least fig. 1; see col. 1, 6<sup>th</sup> parag.), comprising:  
a flexible strip having a plurality of optical waveguides formed in a plurality of waveguide layers (see at least fig. 130/131, a flexible polymeric strip having waveguides in plurality of waveguide layers surrounding the waveguides; see at least col. 66 2<sup>nd</sup> parag.; see also col. 3, 1<sup>st</sup> parag., and/or col. 5, line 58-col. 6, 2<sup>nd</sup> parag.) for providing a plurality of optical paths between opposing ends of said flexible strip (see fig. 130/131, optical paths, waveguides, between opposing ends of said flexible strip), at least one of said optical paths running through at least two layers (shown in at least fig. 31/32, item Z-optical path, Z-waveguide, running through at least two layers encompassing the horizontal waveguides).

However, Yoshimura does not specifically that the above layers is waveguide layers. It is obvious/well-known to those of ordinary skill in the art when the invention was made that the layers surrounding the horizontal waveguides act as cladding and that thus

together with active waveguides/cores are known as waveguide layers, since such optical configuration provides an optical polymeric connector in which optical losses are minimized and coupling efficiency is maximized (see col. 2, 3<sup>rd</sup> para.).

Regarding claims 2-7, Yoshimura further teaches wherein said flexible strip further comprises at least one pass-through between waveguide layers such that at least one of said optical paths is routed through at least two waveguide layers (shown in at least figures 130, 131, 142, 141; see col. 66, last para.-col. 67, 1<sup>st</sup> para.); wherein said at least one pass-through includes a complementary pair of reflective angled surfaces, one of said pair being positioned in each of said two waveguide layers, for redirecting light between said two waveguide layers (shown in at least figures 146 and 105; wherein as shown in fig. 105, each reflector in each waveguide layer, see also col. 42, 2<sup>nd</sup> and last para.); wherein said waveguide has a thickness of from about 50 to about 1000  $\mu\text{m}$  (see at least col. 18, lines 26-27; wherein the waveguide can also have greater than 50  $\mu\text{m}$  thickness see col. 58, lines 1-3); backplane substrate mounted on a backplane substrate 10", and further comprising a mounting structure for positioning and retaining at least two optical circuit board adjacent to respective ends of said flexible strip to provide a plurality of optical paths for communicating optical signals between the optical circuit boards (shown in at least fig. 31-32, items 10", 120, 225, and 210, and see col. 44, line 58-col. 46, line 67); a plurality of electrical traces for

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communicating electrical signals between said optical circuit boards (see at least fig. 31-32, item 30', and col. 45, 2<sup>nd</sup> parag.); wherein at least two of said optical paths within said flexible strip cross over (shown in at least fig. 144, item crossover waveguides).

### ***Citation of Relevant Prior Art***

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Bischel et al. 6556734 teaches at least claims 1-5 and 7

Bischel et al. 6208791 teaches at least claim 1

Bischel et al. 2002003928 teaches at least claim 1

Yoshimura et al. 6785447 teaches at least claim 1

Yoshimura et al. 6706546 teaches at least claim 1

Glebov et al. 20030103712

Nurse et al. 5263111

Hunter 6539143

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

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The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

**or:**

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



K. Cyrus Kianni  
Patent Examiner  
Group Art Unit 2883

March 28, 2005